

Amendments to the Claims:

Please amend the claims as follows:

1. (Currently Amended) A collision recovery signal processing unit for use with a multiple-access telecommunications channel comprising antenna means ~~50~~ having a plurality of branches; a plurality ~~M~~ of spatio-temporal filter means ~~52, 54~~ each arranged to estimate a signal received by the antenna means by application of a different sequence of training-like symbols ~~TLS~~ and to supply a corresponding candidate signal, ~~SC1~~ to ~~SCM~~; and signal selector means ~~56~~ arranged to select from the candidate signals one or more signals in accordance with a predetermined criterion, in which the pre-determined criterion is the distance of a candidate signal from the finite alphabet.

2. (Original) A signal processing unit according to Claim 1 in which training symbols are processed in addition to said training-like symbols.

3. Cancelled.

4. (Currently Amended) A signal processing unit according to Claim ~~13~~ in which the filter means ~~52, 54~~ each operate on a number of information signals T received from the antenna means, in which the finite alphabet has h symbols, and the number M of filter means is given by $M=h^T$.

5. Cancelled.

6. (Currently Amended) A signal processing unit according to Claim 1 further comprising a plurality of captured signal estimators ~~58, 60~~ arranged to receive the selected signals, and having outputs connected to a different signal selector ~~62~~ operative to eliminate signals which are duplicated.

7. (Currently Amended) A signal processing unit according to Claim 1 in which each spatio-temporal filter means ~~52, 54~~ runs the same training-based or semiblind algorithm.

8. (Currently Amended) A radio telecommunications system comprising a plurality of time critical users ~~mn~~; encoder means ~~76~~ to encode signals from said users into a plurality of timeslots ~~10, 12~~; first transmitter/receiver means; second transmitter/receiver means ~~50~~; decoder means ~~86~~; and a data or speech sink ~~88~~; wherein connected to the second transmitter/receiver means ~~50~~ there is signal processing unit comprising antenna means ~~50~~ having a plurality of branches; a plurality ~~M~~ of spatio-temporal filter means ~~52, 54~~ each arranged to estimate a signal received by the antenna means by application of a different sequence of training-like symbols ~~TLS~~ and to supply a corresponding candidate signal, ~~SC1 to SCM~~; and signal selector means ~~56~~ arranged to select from the candidate signals one or more signals in accordance with a predetermined criterion, in which the pre-determined criterion is the distance of a candidate signal from the finite alphabet.

9. (Currently Amended) In a time critical telecommunications system having a multiple access channel in which collisions may occur, a method of collision resolution comprising the steps of receiving signals from the multiple access channel by an antenna having a plurality of branches; estimating received signals by application of a plurality of different sequences of training-like symbols to provide a plurality of candidate signals; and selecting one or more candidate signals in accordance with a predetermined criterion, in which the pre-determined criterion is the distance of a candidate signal from the finite alphabet.

10. (Newly Added) A collision recovery signal processing unit for use with a multiple-access telecommunications channel comprising antenna means having a plurality of branches; a plurality of spatio-temporal filter means each arranged to estimate a signal received by the antenna means by application of a different sequence of training-like symbols and to supply a corresponding candidate signal; and signal selector means arranged to select from the candidate signals one or more signals in accordance with a predetermined criterion, in which the predetermined criterion is the mean square error of the candidate signals.

11. (Newly Added) A collision recovery signal processing unit for use with a multiple-access telecommunications channel comprising antenna means having a plurality of branches; a plurality of spatio-temporal filter means each arranged to estimate a signal received by the antenna means by application of a different sequence of training-like symbols and to supply a corresponding candidate signal; and signal selector means arranged to select from the candidate signals one or more signals in accordance with a predetermined criterion, further comprising a plurality of captured signal estimators arranged to receive the selected signals and having outputs connected to a different signal selector operative to eliminate signals which are duplicated.